

**SONY**<sup>®</sup>

VPL-FX50

# ***LCD Data Projector***

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Operating Instructions

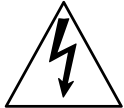
**GB**

**VPL-FX50**

# WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.



This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

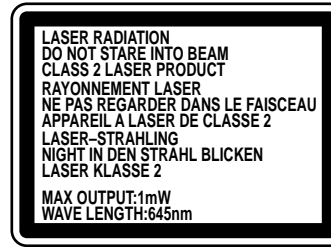


This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## For the customers in the USA

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

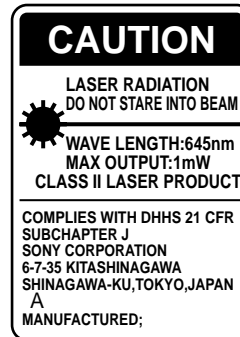
You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.



This label is located on the rear of the Remote Commander.



This label is located on the side of the Remote Commander.

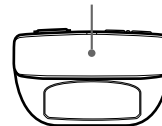


This label is located on the rear of the Remote Commander.



This label is located on the rear of the Remote Commander.

Laser light shines out of this window.



## Caution

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

## Notes

- Do not aim the laser at people or not look into the laser transmitter.
- When the Remote Commander causes malfunction, consult with qualified Sony personnel. We change the Remote Commander as new one according to the guarantee.

## For the customers in Canada

This Class A digital apparatus complies with Canadian ICES-003.

## For the customers in the United Kingdom

### WARNING

**THIS APPARATUS MUST BE EARTHED**

### IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Green-and-Yellow: Earth  
Blue: Neutral  
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:  
The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  $\perp$  or coloured green or green-and-yellow.  
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.  
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

## Voor de klanten in Nederland



- Dit apparaat bevat een vast ingebouwde batterij die niet vervangen hoeft te worden tijdens de levensduur van het apparaat.
- Raadpleeg uw leverancier indien de batterij toch vervangen moet worden. De batterij mag alleen vervangen worden door vakbekwaam servicepersoneel.
- Gooi de batterij niet weg maar lever deze in als klein chemisch afval (KCA).
- Lever het apparaat aan het einde van de levensduur in voor recycling, de batterij zal dan op correcte wijze verwerkt worden.

The socket-outlet should be installed near the equipment and be easily accessible.

Apparaten ma kun tilkoples jordet stikkontakt.  
Apparatet må kun tilkoples jordet stikkontakt.

## Warning on power connection

Use a proper power cord for your local power supply.

	The United States, Canada		Continental Europe		UK, Ireland, Australia, New Zealand	Japan
Plug type	VM0233	290B	YP-12A	COX-07	— <sup>1)</sup>	YP332
Female end	VM0089	386A	YC-13B	COX-02	VM0310B	YC-13
Cord type	SJT	SJT	H05VV-F	H05VV-F	N13237/CO-228	VCTF
Rated Voltage & Current	10A/125V	10A/125V	10A/250V	10A/250V	10A/250V	7A/125V
Safety approval	UL/CSA	UL/CSA	VDE	VDE	VDE	DENTORI

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1) Use the correct plug for your country.



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# Precautions

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## On safety

- Check that the operating voltage of your unit is identical with the voltage of your local power supply.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it further.
- Unplug the unit from the wall outlet if it is not to be used for several days.
- To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- The wall outlet should be near the unit and easily accessible.
- The unit is not disconnected to the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Do not look into the lens while the lamp is on.
- Do not aim the laser at people or not look into the laser transmitter.
- Do not place your hand or objects near the ventilation holes — the air coming out is hot.
- Be careful not to catch your fingers by the adjuster when you lift up the projector. Do not push hard on the top of the projector with the adjuster out.
- Be sure to grasp the both sides of the projector with both your hands when carrying the projector.

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## On illumination

- To obtain the best picture, the front of the screen should not be exposed to direct lighting or sunlight.
- Ceiling-mounted spot lighting is recommended. Use a cover over fluorescent lamps to avoid lowering the contrast ratio.
- Cover any windows that face the screen with opaque draperies.
- It is desirable to install the projector in a room where floor and walls are not of light-reflecting material. If the floor and walls are of reflecting material, it is recommended that the carpet and wall paper be changed to a dark color.

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## On preventing internal heat build-up

After you turn off the power with the I / ⏻ key on the Remote Commander or on the control panel, do not disconnect the unit from the wall outlet while the cooling fan is still running.

### Caution

The projector is equipped with ventilation holes (intake) on the bottom and ventilation holes (exhaust) on the front. Do not block or place anything near these holes, or internal heat build-up may occur, causing picture degradation or damage to the projector.

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## On cleaning

- To keep the cabinet looking new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents, such as thinner, benzene, or abrasive cleansers, since these will damage the cabinet.
- Avoid touching the lens. To remove dust on the lens, use a soft dry cloth. Do not use a damp cloth, detergent solution, or thinner.
- Clean the filter at regular intervals every 300 hours.

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## On repacking

Save the original shipping carton and packing material; they will come in handy if you ever have to ship your unit. For maximum protection, repack your unit as it was originally packed at the factory.

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## On LCD projector

The LCD projector is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD projector. This is a normal result of the manufacturing process and does not indicate a malfunction.

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# Features

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## High brightness, high picture quality

### • High brightness

The high aperture ratio LCD panel with a microlens and the 250 W UHP lamp provide high brightness (light output 3500 ANSI lumen) and excellent uniformity on the picture.

### • High resolution

By adopting three 1.3-inch, approximately 790,000-pixels XGA panels, this projector can project sharp picture with the resolutions of 1024 × 768 pixels for RGB input, and 750 horizontal TV lines for video input.

### • High picture performance

The DDE (Dynamic Detail Enhancer) technology, newly and originally developed by Sony, enables converting interlace format video signal to progressive format, allowing you to obtain a detailed picture. The technology also reproduces the film sources in 2-3 Pull-Down format with smooth picture movement.

The internal RGB enhancer provides sharper RGB pictures. The 10-bit 3D Digital Gamma correction for good picture uniformity is also provided.

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## Convenient and flexible setup

### • Power zoom/power focus lens and the lens shift function

The projector is equipped with a 1.3-times power zoom and power focus lens, which allows you to change the size of the projected image without having to move the projector. The lens shift function enables you to install the projector in a wide range of locations, without worrying about trapezoid distortion. Also, three optional lenses are available for the projector, depending on your setup condition.

### • Center positioned lens

The projector is designed to locate the lens in the center of the unit. This enables an easy setup, as the lens center aligns with the center of the screen.

### • Tilt installation (in front and rear)

You can install the projector by tilting it 90 degrees at the rear or 90 degrees in front. You can use a mirror for rear projection.

### • Twin stack installation

Thanks to the lens shift function, two projectors can be stacked, which improves the brightness of the image.

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## Multi scan compatibility

### • DVI and 5BNC connectors

The projector has the DVI (Digital Visual Interface) connector, the up-to-date digital input connector, which allows you to connect to the digital or analog RGB equipment equipped with the DVI output. The 5BNC input connectors allow you to connect to workstation output high-resolution signals and to connect to a computer from a long distance.

The projector has 44 preset data for input signals in the memory, which allows you to project a clear picture on the screen simply by connecting equipment and pressing the APA (Auto Pixel Alignment) key.

### • Accept various input signals

The projector accepts video signals of the composite, S video and component, and can also display the 15k RGB, DTV, HDTV, VGA<sup>1)</sup>, SVGA<sup>1)</sup>, XGA<sup>1)</sup>, SXGA<sup>1)</sup> and UXGA<sup>1)</sup> (fV=60 Hz) signals.

### • Scan converter built-in

The projector has a built-in scan converter which converts the input signal within 1024 × 768 pixels.

### • Compatible with six color systems

NTSC<sup>3,58</sup>, PAL, SECAM, NTSC<sup>4,43<sup>2)</sup></sup>, PAL-M or PAL-N color system can be selected automatically or manually.

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## Other function

### • Networking compatibility

The projector is equipped with a PC CARD slot and ETHER connector, which allows you to connect to a wired or wireless LAN.

*For information on the networking function of this projector, refer to the supplied Operating Instructions for Networking.*

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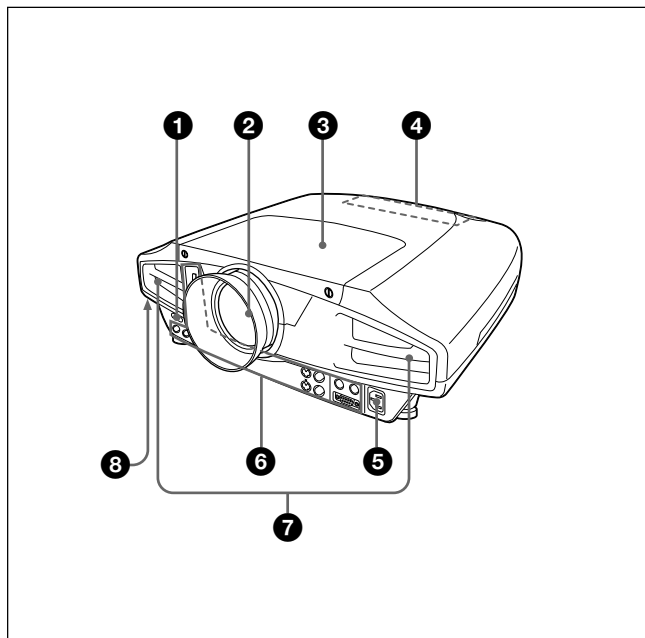
1) VGA, SVGA, XGA, SXGA and UXGA are registered trademarks of the International Business Machines Corporation, U.S.A.

2) NTSC<sup>4,43</sup> is the color system used when playing back a video recorded on NTSC on an NTSC<sup>4,43</sup> system VCR.

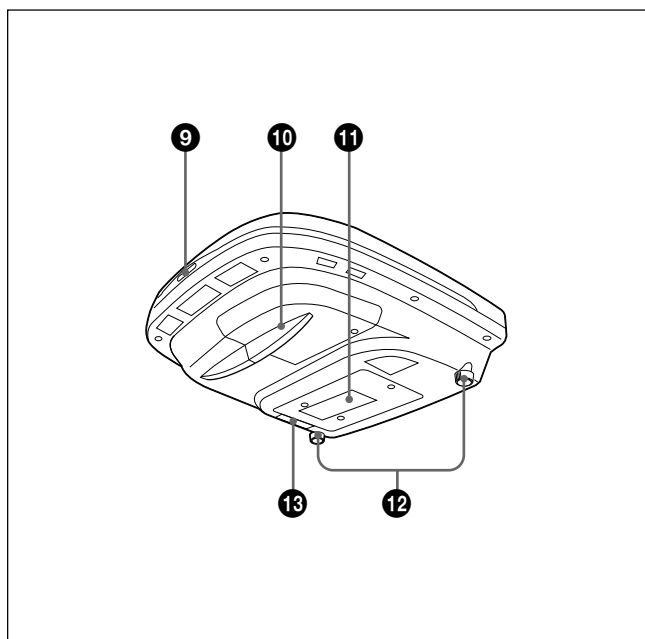


# Location and Function of Controls

## Front



## Rear/Bottom



### ❶ Front remote control detector

### ❷ Lens

Remove the lens cap before projection.

### ❸ Lens cover

### ❹ Control panel

For details, see "Control panel" on page 10 (GB).

### ❺ AC IN socket

Connects the supplied AC power cord.

### ❻ Connector panel

For details, see page 12 (GB).

### ❼ Ventilation holes (exhaust)

### ❽ Security lock

Connects to an optional security cable (Kensington's).

The security lock corresponds to Kensington's MicroSaver® Security System.

If you require further information, contact

Kensington  
2855 Campus Drive  
San Mateo, CA 94403

in North America  
Phone: 800-235-6708  
Fax: 800-247-1317

Outside North America  
Phone: 847-541-9500

Home page address:  
<http://www.kensington.com/>

### ❹ Rear remote control detector

### ❺ Lamp cover

### ❻ Ventilation holes (intake)

**Notes**

- Do not place anything near the ventilation holes as it may cause internal heat build-up.
- Do not place your hand or objects near the ventilation holes — the air coming out is hot.

**12 Adjuster**

Use the adjusters to keep the projector level if it is installed on an uneven surface.

Adjust the height so that the projector becomes level. The projector is raised by turning the adjusters clockwise, or it is lowered by turning them counterclockwise.

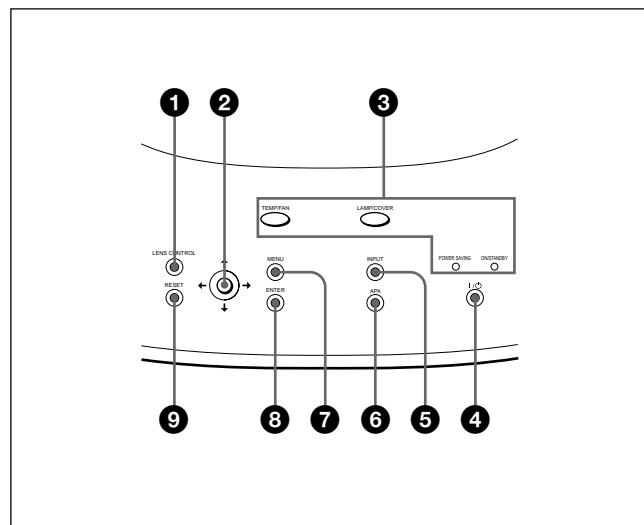
**13 Air filter**

To remove the air filter, pull it out horizontally with this part.

For details, see “Cleaning the Air Filter” on page 31 (GB).

**Note**

**Clean the air filter every 300 hours** to ensure optimal performance.

**Control panel****1 LENS CONTROL key**

Enters the focus, zoom or shift adjustment mode. Next adjust them using the arrow keys. Each time you press the key, the mode changes to LENS FOCUS, LENS ZOOM and LENS SHIFT in order. The mode currently selected is displayed on the screen.

**LENS FOCUS:** Enters the focus adjustment mode.

Next adjust the focus using the arrow keys. Press the **↑** or **→** key to focus on a picture further back, and the **↓** or **←** key to focus on a forward picture. You cannot select LENS FOCUS when you attach the optional lens.

**LENS ZOOM:** Enters the zoom adjustment mode.

Next adjust the picture size using the arrow keys. Press the **↑** or **→** key to enlarge the picture size, and the **↓** or **←** key to reduce it. You cannot select LENS ZOOM when you attach the optional lens.

**LENS SHIFT:** Enters the shift adjustment mode.

Next adjust the vertical position of the picture using the arrow keys. Press the **↑** or **→** key to move the picture upward, and the **↓** or **←** key to move it downward.

**2 Arrow keys (↑/↓/←/→)**

Used to adjust focus, zoom and shift, or to move the cursor or make various adjustments in the menu.

**3 Indicators****TEMP (Temperature)/FAN**

- Lights up when temperature inside the projector becomes unusually high.
- Flashes when the fan is broken.

**LAMP/COVER**

- Lights up when the lamp has reached the end of its life or becomes a high temperature.
- Flashes when the lamp cover or air filter is not secured firmly.

**POWER SAVING**

Lights up when the projector is in the power saving mode. When POWER SAVING in the SET SETTING menu is set to ON, the projector goes into the power saving mode if no signal is input for 10 minutes. Although the lamp goes out, the cooling fan keeps running. In the power saving mode, any key does not function for the first 40 seconds. The power saving mode is canceled when a signal is input or any key is pressed.

**ON/STANDBY**

- Lights in red when the AC power cord is plugged into the wall outlet. Once in the standby mode, you can turn on the projector with the I / ⏻ key.
  - Lights in green when the power is turned on.
  - Flashes in green while the cooling fan runs after turning off the power with the I / ⏻ key. The fan runs for about 120 seconds after turning off the power.
- The ON/STANDBY indicator flashes quickly for the first 40 seconds. During this time, you cannot turn the power back on with the I / ⏻ key.

*For details on the LAMP/COVER and the TEMP/FAN indicators, see page 33 (GB).*

**4 I / ⏻ (on / standby) key**

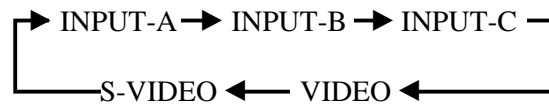
Turns on the projector when the projector is in the standby mode. The ON/STANDBY indicator lights in green when the power is turned on.

**When turning off the power, press the I / ⏻ key twice following the message on the screen, or press and hold the key for about one second.**

*For details on steps for turning off the power, see “To turn off the power” on page 20 (GB).*

**5 INPUT key**

Selects the input signal. Each time you press the key, the input signal switches as follows:



INPUT C is not displayed when INPUT C FUNC. is set to OFF in the INSTALL SETTING menu.

**6 APA (Auto Pixel Alignment) key**

Adjusts a picture to be projected clearest automatically while a signal from the computer is input. Adjusts the shift (up/down and left/right) at the same time automatically. (Only when inputting a RGB (analog) signal from the computer).

**Note**

Press the APA key when the full image is displayed on the screen. If there are black edges around the image, the APA function will not function properly and the image may extend beyond the screen.

**7 MENU key**

Displays the on-screen menu. Press again to clear the menu.

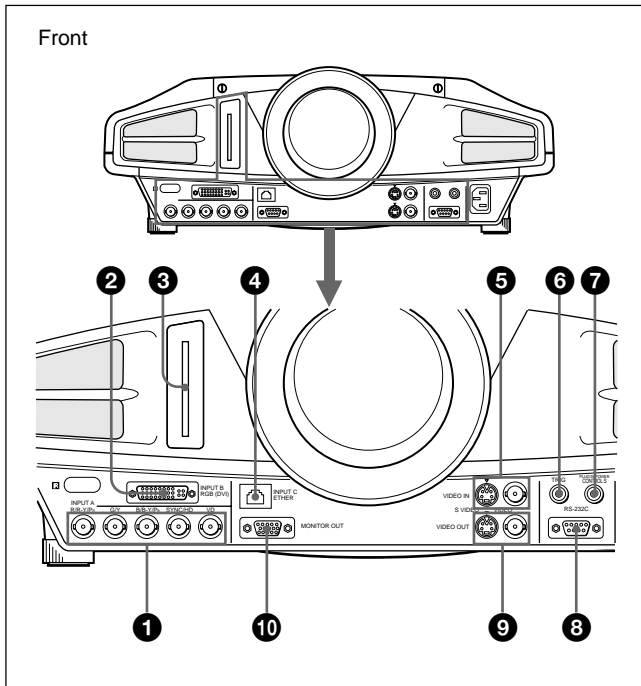
**8 ENTER key**

Enters the settings of items in the menu system.

**9 RESET key**

Resets the value of an item back to its factory preset value. This key functions when the menu or a setting item is displayed on the screen.

## Connector panel



### ① INPUT A 5BNC connectors (R/R-Y/Pr, G/Y, B/B-Y/Pb, SYNC/HD, VD connectors) (BNC type)

Connect to a high-resolution computer or VCR where signals are transmitted long distances; for example, when the projector is installed on the ceiling. According to the connected equipment, computer, component (R-Y/Y/B-Y), HDTV or DTV signal is selected.

### ② INPUT B RGB (DVI) connector

Connect to equipment equipped with the DVI output (digital or analog RGB) using a commercially available DVI cable.

### ③ INPUT C PC CARD slot (Type II)

A wireless LAN PC card or PC memory card can be attached according to your requirement.

*For details, see "Installing a PC card" on page 16 (GB).*

### ④ INPUT C ETHER connector (10BASE-T)

Connect to a computer on the same LAN with the LAN cable when you use the networking function of this projector.

### ⑤ VIDEO IN connectors

Connect to external video equipment such as a VCR.

**S VIDEO (mini DIN 4-pin):** Connects to the S video output (Y/C video output) on video equipment.

**VIDEO (BNC type):** Connects to the composite video output.

### ⑥ TRIG (trigger output) jack (monaural minijack)

The signal is transmitted from this jack to the connected equipment whether the projector is on or off. (This is not a power source for external equipment.) Approximately 12 V DC signal is output when the projector power is on. The signal is 0 volt level output when the projector power is off.

### ⑦ CONTROL S/PLUG IN POWER (DC 5V output) jack (stereo minijack)

Connects to the control S out jacks of the Sony equipment. Connects to the CONTROL S OUT jack on the supplied Remote Commander when using it as a wired Remote Commander. In this case, you do not need to install the batteries in the Remote Commander, since the power is supplied from this jack.

### ⑧ RS-232C connector (D-sub 9-pin, female)

Connects to a computer to operate the projector from the computer.

### ⑨ VIDEO OUT connectors

**S VIDEO (mini DIN 4-pin):** Used as loop-through output via the S VIDEO IN connector.

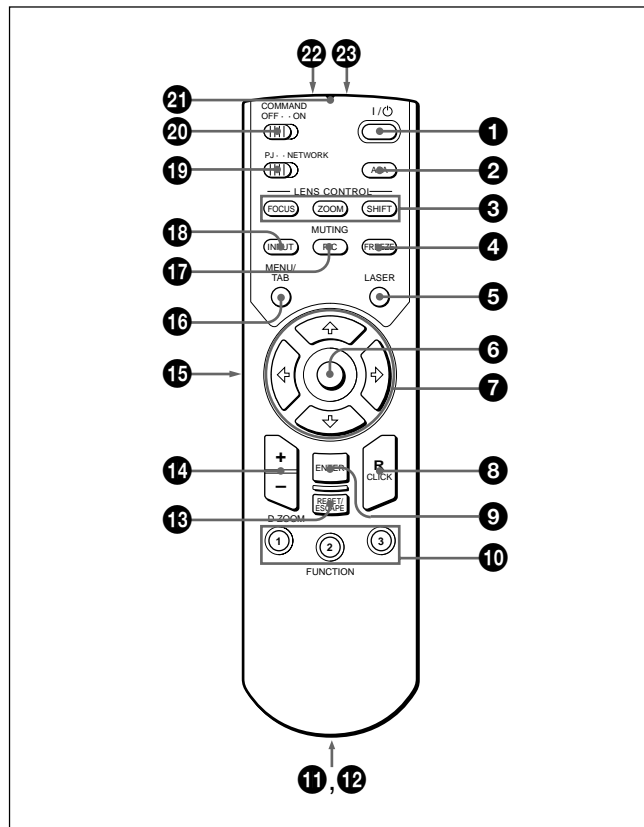
**VIDEO (BNC type):** Used as loop-through output via the VIDEO IN connector.

### ⑩ MONITOR OUT connector (HD D-sub 15-pin, female)

Connects to the monitor input connector on the monitor. Outputs signals from the selected channel in the INPUT A (5BNC) or INPUT B (DVI) connector. This connector does not output any signals from the DVI connector if the input signal is digital.

## Remote Commander

The keys which have the same names as those on the control panel function identically.



### Notes on laser beam

- Do not look into the laser transmitter.
- Do not aim the laser at people.

#### ① I / ⏻ key

#### ② APA (Auto Pixel Alignment) key

#### ③ LENS CONTROL FOCUS/ZOOM/SHIFT keys

#### ④ FREEZE key

Used to freeze the picture projected. To cancel the frozen picture, press the key again.

#### ⑤ LASER key

Emits laser beam from the laser transmitter while you keep this key pressed.

#### ⑥ Mouse

This functions as the mouse in the INPUT C window of this projector when the PJ/NETWORK select switch is set to NETWORK.

#### ⑦ Arrow keys (↑/↓/←/→)

#### ⑧ R (right) CLICK key

When the PJ/NETWORK select switch is set to NETWORK, this key functions as the right button on the mouse in the INPUT C window of this projector.

#### ⑨ ENTER key

#### ⑩ FUNCTION 1/2/3 keys

Functions when the PJ/NETWORK select switch is set to NETWORK.

When the INPUT C window is displayed on the projector, you can start an application by just pressing a FUNCTION key. To use this function, allocate an application to a FUNCTION key. Allocation to the FUNCTION 3 key is set to the keyboard software display.

For details on how to allocate an application to the FUNCTION keys, refer to the Operating Instructions for Networking.

#### ⑪ Strap holder

Attaches a strap.

#### ⑫ CONTROL S OUT jack (stereo minijack)

Connects to the CONTROL S IN jack on the projector with the connecting cable (not supplied) when using the Remote Commander as a wired one. In this case, you do not need to install the batteries since the power is supplied via the CONTROL S IN jack on the projector.

#### ⑬ RESET/ESCAPE key

When the PJ/NETWORK select switch is set to

**PJ:** Functions as the RESET key.

When the PJ/NETWORK select switch is set to **NETWORK:** Functions as the ESCAPE key of the keyboard when the INPUT C window is displayed.

#### ⑭ D ZOOM +/- key

Enlarges the image at a desired location on the screen.

**+**: Pressing the + key once displays the icon. This icon indicates the point you want to enlarge. Use an arrow key (↑/↓/←/→) to move the icon to the point to be enlarged. Press the + key repeatedly until the image is enlarged to your requirements.

**-**: Pressing the - key reduces an image that has been enlarged with the D ZOOM + key.

#### ⑮ L (left) CLICK key

When the PJ/NETWORK select switch is set to NETWORK, this key functions as the left button on a mouse in the INPUT C window of the projector.

#### ⑯ MENU/TAB key

When the PJ/NETWORK select switch is set to

**PJ:** Functions as the MENU key.

When the PJ/NETWORK select switch is set to **NETWORK:** Functions as the TAB key of the keyboard when the INPUT C window is displayed.

**17 PIC MUTING key**

Cuts off the picture. Press again to restore the picture.

**18 INPUT key**

**19 PJ/NETWORK select switch**

To use the Remote Commander for network operations, set the switch to NETWORK. Set the switch to PJ to use the Remote Commander for normal operations other than networking.

**20 COMMAND ON/OFF switch**

When this switch is set to OFF, no key on the Remote Commander function. This saves the battery power.

**21 Transmission indicator**

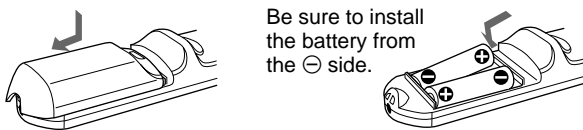
Lights up when you press a key on the Remote Commander. This indicator does not light up when you use the laser pointer.

**22 Infrared transmitter**

**23 Laser transmitter**

**Battery installation**

- 1 Push and slide to open the lid, then install the two size AA (R6) batteries (supplied) with the correct polarity.



- 2 Replace the lid.

**Notes on batteries**

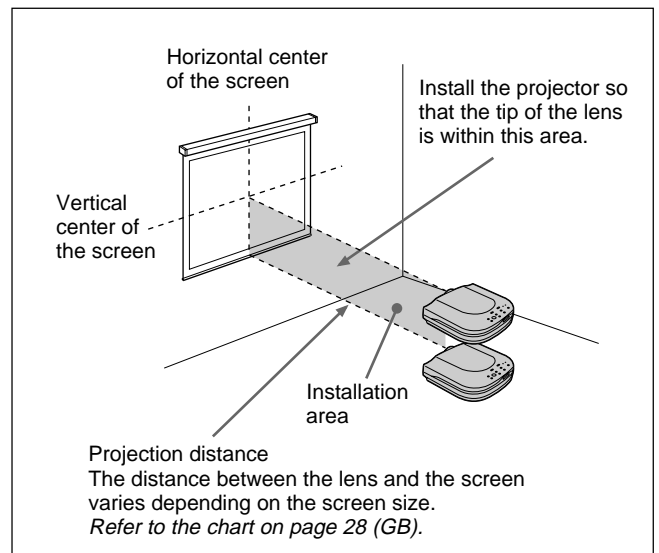
- Make sure that the battery orientation is correct when inserting batteries.
- Do not mix an old battery with a new one, or different types of batteries.
- If you will not use the Remote Commander for a long time, remove the batteries to avoid damage from battery leakage. If batteries have leaked, remove them, wipe the battery compartment dry and replace the batteries with new ones.

**Notes on Remote Commander operation**

- Make sure that there is nothing to obstruct the infrared beam between the Remote Commander and the remote control detector on the projector.
- The operation range is limited. The shorter the distance between the Remote Commander and the projector is, the wider the angle within which the commander can control the projector.

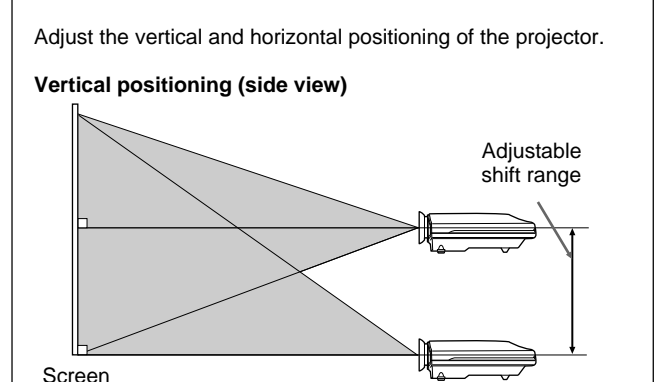
# Installing the Projector

This section describes the installation arrangements for installing the projector.



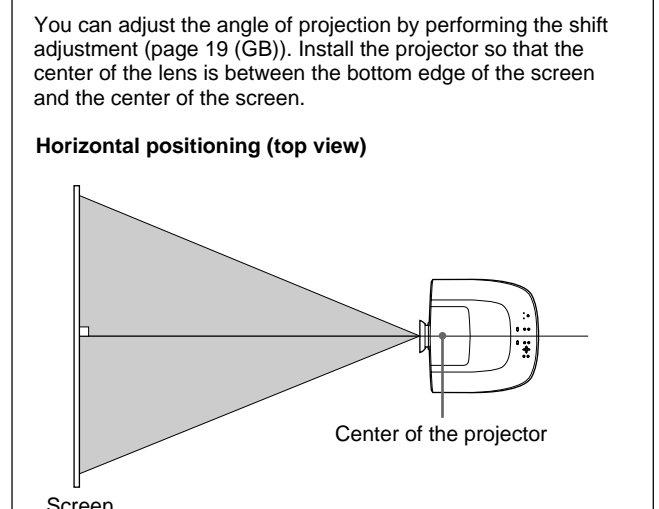
Adjust the vertical and horizontal positioning of the projector.

**Vertical positioning (side view)**



You can adjust the angle of projection by performing the shift adjustment (page 19 (GB)). Install the projector so that the center of the lens is between the bottom edge of the screen and the center of the screen.

**Horizontal positioning (top view)**



Adjust the horizontal positioning of the projector so that the center of the lens is aligned with the horizontal center of the screen.

# Connecting

**When making connections, be sure to:**

- turn off all equipment before making any connections.
- use the proper cables for each connection.
- insert the plugs of the cables properly; plugs that are not fully inserted often generate noise. When pulling out a cable, be sure to pull it out from the plug, not the cable itself.

## Connecting with a Computer or a VCR

This section describes how to connect the projector to a computer or video equipment.

Also refer to the instruction manual of equipment to be connected.

### Notes

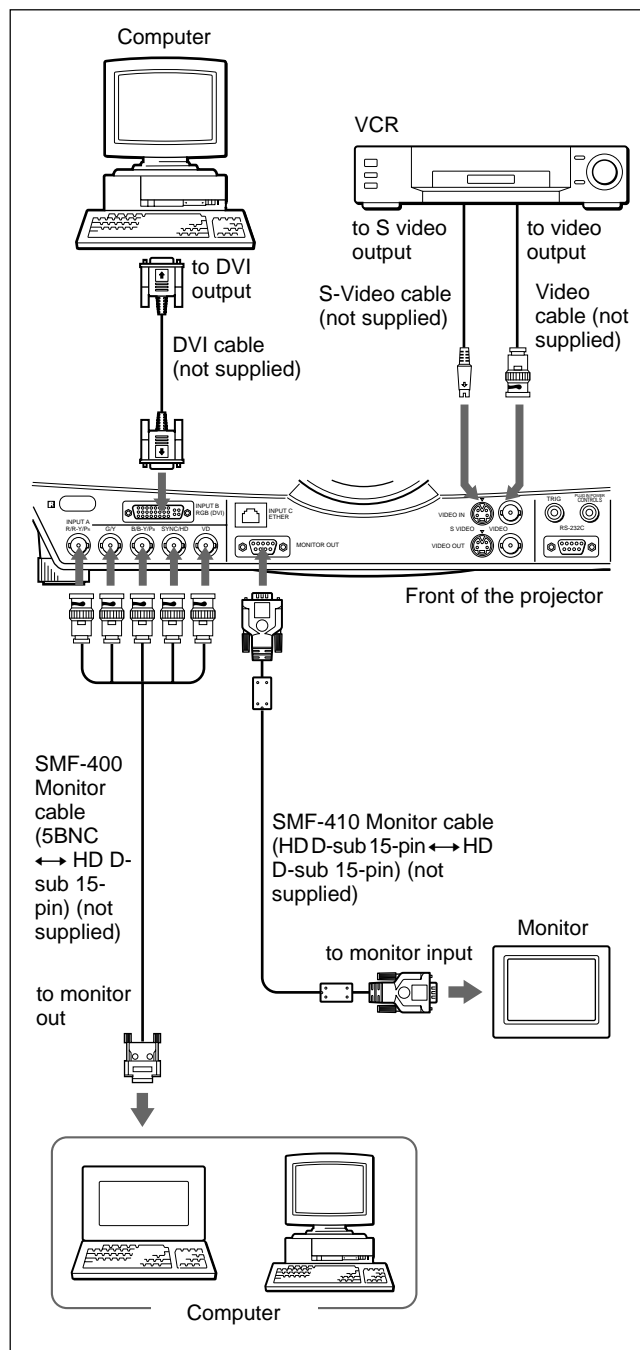
- This unit accepts the VGA, SVGA, XGA, SXGA or UXGA (60 Hz) signals. However, we recommend you to set the output signal of your computer to the XGA.
- If you set your computer, such as a notebook type IBM PC/AT <sup>1)</sup> compatible, to output the signal to both the display of your computer and the external monitor, the picture of the external monitor may not appear properly. In such cases, set the output mode of your computer to output the signal to only the external monitor.

*For details, refer to the operating instructions supplied with your computer.*

- This projector complies with DDC1 and DDC2B (Plug & Play). (DDC1 and DDC2B are the Display Data Channel (DDC™) <sup>2)</sup> standard in the VESA standard.) When connecting a DDC1 host system, the projector synchronizes with V.CLK that follows the VESA standard and outputs EDID (Extended Display Identification Data) to the data line. When connecting a DDC2B host system, the projector automatically switches to the appropriate communication mode.

The INPUT B RGB (DVI) connector complies with the VESA DDC2B. If your computer or graphics board is compatible with DDC, turn on the power of the equipment as follows:

- 1 According to the input signal, set INPUT-B TERM. in the SET SETTING menu to PC ANALOG or PC DIGITAL.
- 2 Connect the projector to the computer with the DVI cable.
- 3 Turn on the power of the projector.
- 4 Boot up the computer.



### Notes

- Set INPUT-A in the SET SETTING menu to COMPUTER when you connect the computer to the INPUT A connector.  
*For details, see page 26 (GB).*
- When connecting a Macintosh<sup>3)</sup> computer equipped with video output connector of a type having two rows of pins to the INPUT A connector, use a commercially available plug adaptor.
- Select PC DIGITAL or PC ANALOG using INPUT-B TERM. in the SET SETTING menu depending on the signal input.  
*For details, see page 26 (GB).*

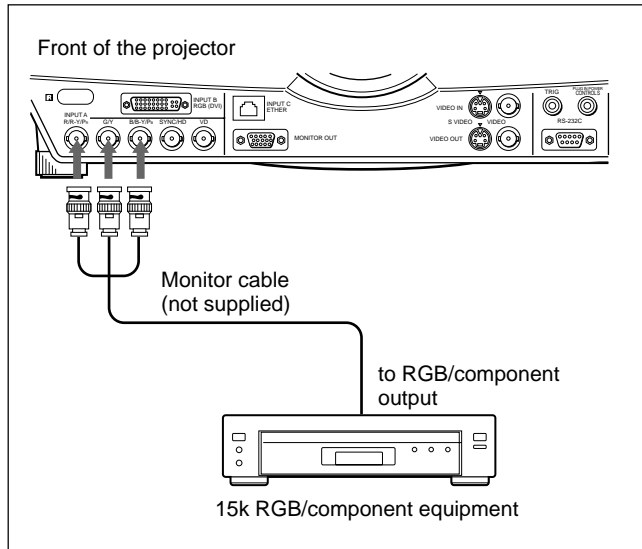
1) IBM and PC/AT are a trademark and a registered trademark of International Business Machines Corporation, U.S.A.

2) DDC™ is a registered trademark of the Video Electronics Standard Association.

3) Macintosh is a registered trademark of Apple Computer Inc.

## Connecting with a 15k RGB/Component Equipment

This section describes how to connect the projector with a 15k RGB/component equipment. Also refer to the instruction manuals of the equipment to be connected.



### Notes

- Set the aspect ratio using ASPECT in the INPUT SETTING menu according to the input signal.  
*For details, see page 24 (GB).*
- Select the input signal using INPUT-A in the SET SETTING menu.  
*For details, see page 26 (GB).*
- Use the composite sync signal when you input the external sync signal from 15k RGB/component equipment.

### Connecting to a HDTV 1035/60i

Since the screen ratio of a high definition image is 16:9 and 576 lines are displayed in the vertical direction, the image displayed is not a high-definition image.

## Connecting to LAN

This projector is compatible with networking. Installing a wireless LAN PC card or using the ETHER connector enables you to connect the projector to a wireless or wired LAN. You can also install a PC memory card.

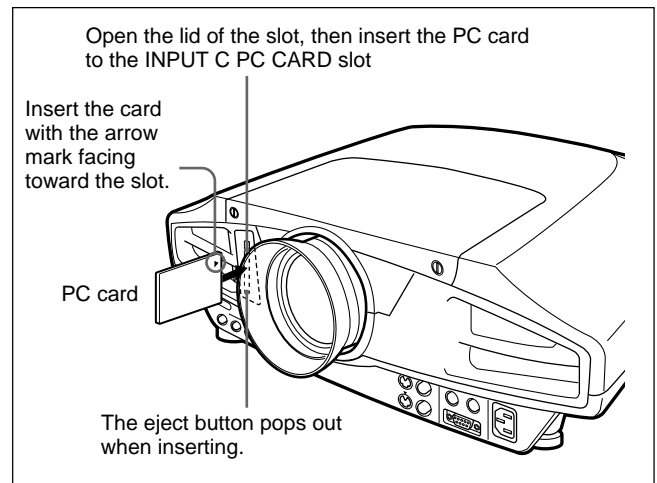
This section describes how to connect to LAN and how to install a PC card.

Whenever you connect the projector to LAN, set INPUT C FUNC. in the INSTALL SETTING menu to ON.

*For details, see page 27 (GB).*

### Installing a PC card

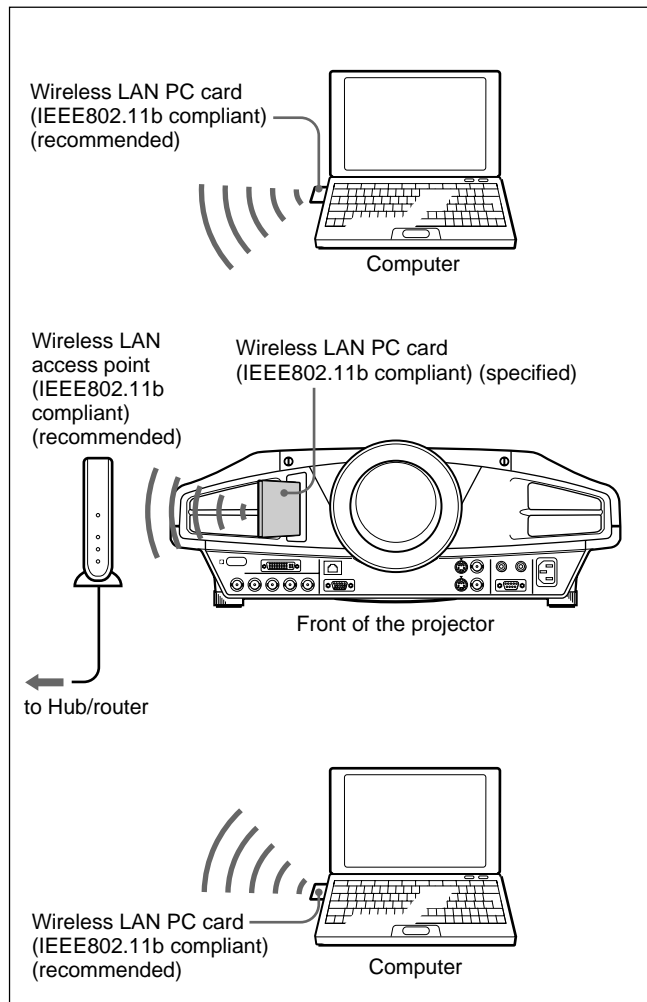
When you use a wireless LAN PC card or memory card, insert the card into the INPUT C PC CARD slot.



To remove the PC card from the slot, press the eject button.



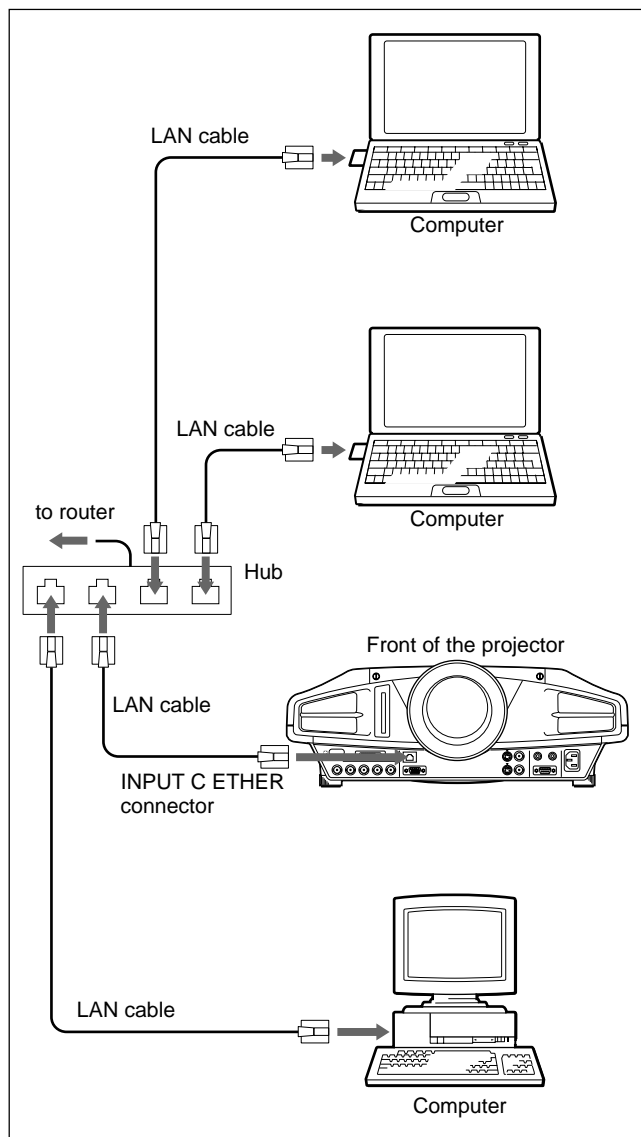
### Connection using a wireless LAN PC card



**Notes**

- For details on the recommended PC card or wireless LAN access point, see the attached “Recommended PC card/wireless LAN access point.”
- When you use LAN, you must set the IP address. For details of setting IP address, etc., see the supplied “Operating Instructions for Networking.”

### Connection using the INPUT C ETHER connector



### Installing a PC memory card

If you store the file created with Microsoft PowerPoint<sup>1)</sup> in a memory card and insert it into the INPUT C PC CARD slot, you can run a presentation without connecting a computer.

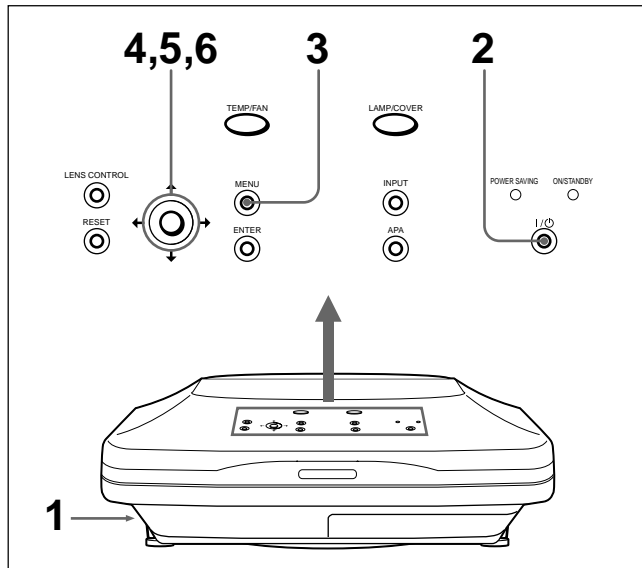
*For attaching and removing the PC memory card, see “Installing a PC card” on page 16 (GB).*

*For details on the recommended PC card, see the attached “Recommended PC card/wireless LAN access point.”*

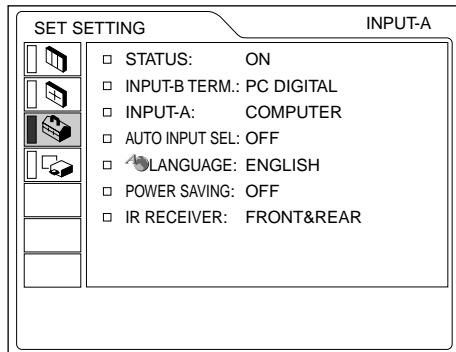
1) PowerPoint is a registered trademark of Microsoft Corporation in the United States and/or other countries.

## Selecting the Menu Language

You can select the language for displaying in the menu and other on screen displays from 7 languages. The factory setting is ENGLISH.



- 1** Plug the AC power cord into the wall outlet.
- 2** Press the I / ⏻ key to turn on the power.
- 3** Press the MENU key.  
The menu display appears.
- 4** Press the ↑ or ↓ key to select the SET SETTING menu, then press the → or ENTER key.  
The SET SETTING menu appears.

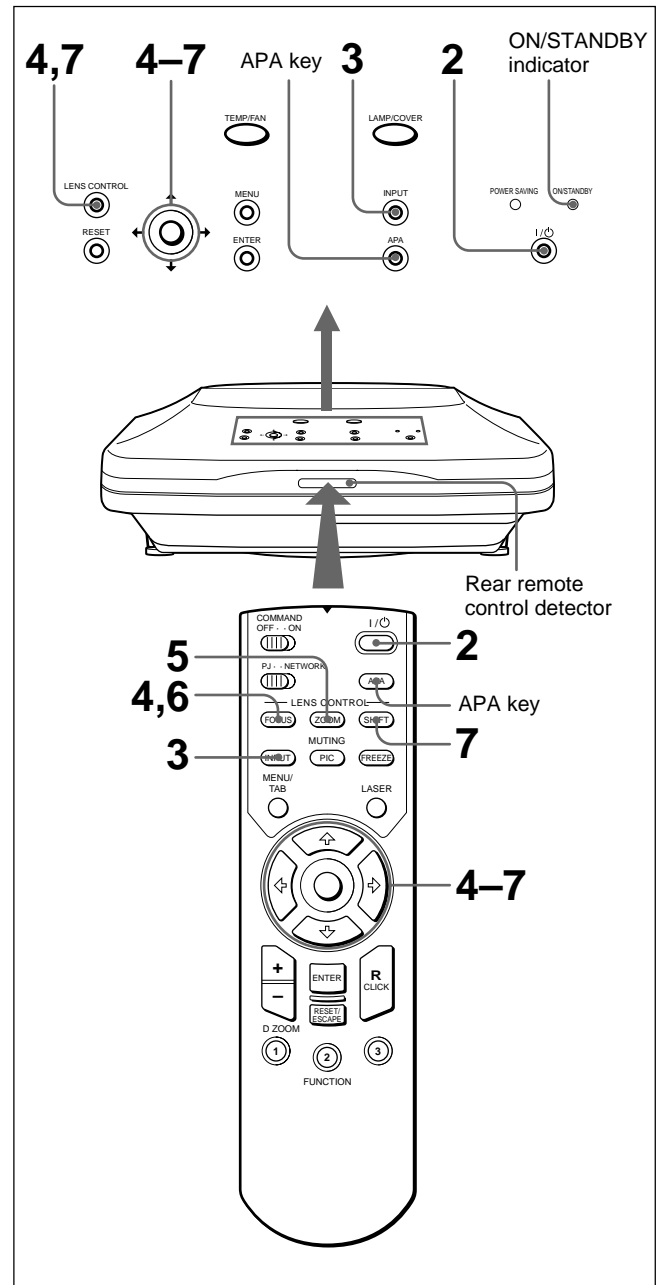


- 5** Press the ↑ or ↓ key to select LANGUAGE, then press the → or ENTER key.
- 6** Press the ↑ or ↓ key to select a language, then press the ← or ENTER key.  
The menu changes to the selected language .

### To clear the menu display

Press the MENU key.  
The menu display disappears automatically if no key is pressed for one minute.

## Projecting



- 1** After all equipment is connected completely, plug the AC power cord into the wall outlet.  
The ON/STANDBY indicator lights in red and the projector goes into the standby mode.
- 2** Press the I / ⏻ key to turn on the projector.  
The ON/STANDBY indicator lights in green.
- 3** Turn on equipment connected to the projector. Press the INPUT key to select the input source.

**INPUT-A:** Selects video signal input from the INPUT A connector.

**INPUT-B:** Selects video signal input from the INPUT B connector.

**INPUT-C:** Selects to display the Windows CE window.

**VIDEO:** Selects video signal input from the VIDEO (VIDEO IN) jack.

**S-VIDEO:** Selects video signal input from the S VIDEO (VIDEO IN) jack.

- 4** Press the FOCUS key then the **↑** or **↓** key on the Remote Commander to adjust the focus.

“LENS FOCUS” appears on the screen during adjustment.

- 5** Press the ZOOM key then the **↑** or **↓** key on the Remote Commander to adjust the picture size.

“LENS ZOOM” appears on the screen during adjustment.

- 6** Press the FOCUS key and arrow keys on the Remote Commander to adjust the focus again.

- 7** Press the SHIFT key then the **↑** or **↓** key on the Remote Commander to adjust the vertical position of the picture.

“LENS SHIFT” appears on the screen during adjustment.

### Note on focus and zoom adjustments

If the optional VPLL-ZM101, VPLL-ZM31 or VPLL-FM21 lens is installed, perform the focus and zoom adjustments manually.

### To use the keys on the control panel for focus, zoom and shift adjustments

Press the LENS CONTROL key repeatedly to display the adjustment mode you want. Each press changes the mode, “LENS FOCUS,” “LENS ZOOM” and “LENS SHIFT” in this order. Then press the arrow keys to adjust.

#### Note

Looking into the lens when projecting may cause injury to your eyes.

## Cut off the picture

Press the PIC MUTING key on the Remote Commander. To restore the picture, press the PIC MUTING key again.

## To get the clearest picture

You can get the suitable picture when a signal from the computer is input. Press the APA key. The picture is automatically adjusted to be projected clearest.

#### Notes

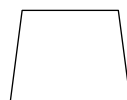
- Adjust the signal when the still picture is displayed on the screen.
- Press the APA key when the full image is displayed on the screen. If there are black edges around the image, the APA function will not function properly and the image may extend beyond the screen.
- If you switch the input signal or re-connect a computer, press the APA key again to get the suitable picture.
- “ADJUSTING” appears on the screen. To restore the original screen, press the APA key again during the adjustment.
- “Complete!” appears on the screen when the picture is adjusted properly. The picture may not be adjusted properly depending on the kinds of input signals.
- Adjust the items in the INPUT SETTING menu when you adjust the picture manually.  
*For details, see page 23 (GB).*

## To correct the trapezoid

When the projecting image is a trapezoid, perform the shift adjustment with the SHIFT key.

If the image is still a trapezoid, correct it in DIGIT KEYSTONE in the INSTALL SETTING menu.

**When the base edge is longer than the upper edge as shown in the figure below:**



Set the value to negative.

**When the upper edge is longer than the base edge as shown in the figure below:**



Set the value to positive.

*For details on “DIGIT KEYSTONE,” see page 27 (GB).*

## To turn off the power

- 1 Press the I / ⏻ key.

“Power OFF?” appears on the screen.

### Note

The message will disappear if you press any key except the I / ⏻ key, or if you do not press any key for five seconds.

- 2 Press the I / ⏻ key again.

The ON/STANDBY indicator flashes in green and the fan continues to run for about 120 seconds to reduce the internal heat. Also, the ON/STANDBY indicator flashes quickly for the first 40 seconds. During this time, you will not be able to turn the power back on with the I / ⏻ key.

- 3 Unplug the AC power cord from the wall outlet after the fan stops running and the ON/STANDBY indicator lights in red.

## When you cannot confirm the on-screen message

When you cannot confirm the on-screen message in a certain condition, you can turn off the power by holding the I / ⏻ key for about one second.

### Note

**Do not unplug the AC power cord while the fan is still running; otherwise, the fan will stop although the internal heat is still high, leading to breakdown of the projector.**

## About the air filter cleaning

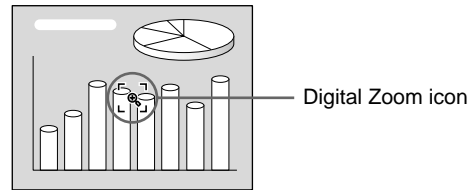
Clean the air filter every 300 hours to ensure optimal performance.

## To enlarge the image (Digital Zoom function)

You can enlarge the point on the image you select. This function works only when a signal from a computer (except for UXGA) is input.

- 1 Press the D ZOOM + key on the Remote Commander.

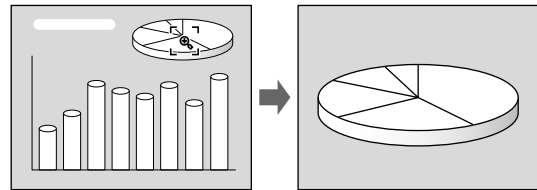
The Digital Zoom icon appears in the center of the image.



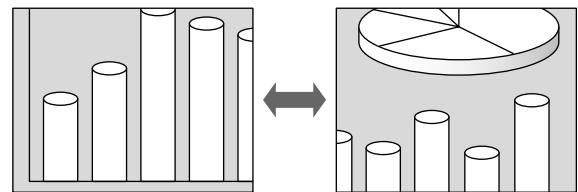
- 2 Move the icon to the point on the image you want to enlarge. Use the arrow keys (↑/↓/←/→) to move the icon.
- 3 Press the D ZOOM + key again.

The image where the icon is located is enlarged. The enlargement ratio is displayed on the screen for a few seconds.

By pressing the + key repeatedly, the image size increases. (ratio of enlargement: max. 4 times)



Use the arrow keys (↑/↓/←/→) to scroll the enlarged image.



## To return the image back to its original size

Press the D ZOOM – key. Just pressing the RESET key returns the image back to its original size immediately.

## To freeze the image projected (Freeze function)

Press the FREEZE key. “FREEZE” appears when the key is pressed. This function works only when a signal from a computer (except for UXGA) is input. To restore the original screen, press the FREEZE key again.

## To use the Laser Pointer function

Press the LASER key on the Remote Commander. The laser pointer appears. The pointer is helpful in indicating a particular point on the screen.

# Using the MENU

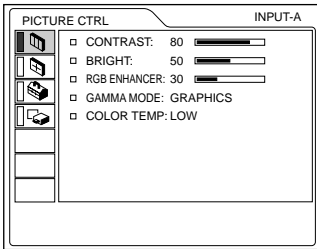
The projector is equipped with an on-screen menu for making various adjustments and settings.

## Note

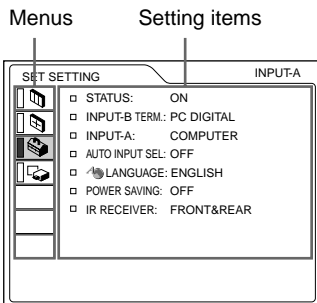
Before operation, confirm that the PJ/NETWORK select switch on the Remote Commander is set to PJ. If it is set to NETWORK, the menu display will not appear even when you press the MENU key on the Remote Commander.

To select the language used in the menu, see page 26 (GB).

- 1 Press the MENU key.  
The menu display appears.  
The menu presently selected is shown as a yellow button.



- 2 Use the **↑** or **↓** key to select a menu, then press the **→** or ENTER key.  
The selected menu appears.



- 3 Select an item.  
Use the **↑** or **↓** key to select the item, then press the **→** or ENTER key.
- 4 Make setting or adjustment on an item.  
*For details on setting individual items, see the relevant menu pages.*

## To clear the menu

Press the MENU key.

The menu display disappears automatically if no key is pressed for one minute.

## To reset items that have been adjusted

Press the RESET key.

“Complete!” appears on the screen and the settings appearing on the screen will be reset to their factory preset values.

Items that can be reset are:

- “CONTRAST”, “BRIGHT”, “COLOR”, “HUE”, “SHARP” and “RGB ENHANCER” in the PICTURE CTRL menu.
- “DOT PHASE”, “SIZE H” and “SHIFT” in the INPUT SETTING menu.
- “DIGIT KEYSTONE” in the INSTALL SETTING menu.

## About the memory of the settings

The settings are automatically stored in the projector memory.

## When no signal is input

When there is no input signal, “NO INPUT—Cannot adjust this item.” appears on the screen, and each item cannot be adjusted.

## About the menu display

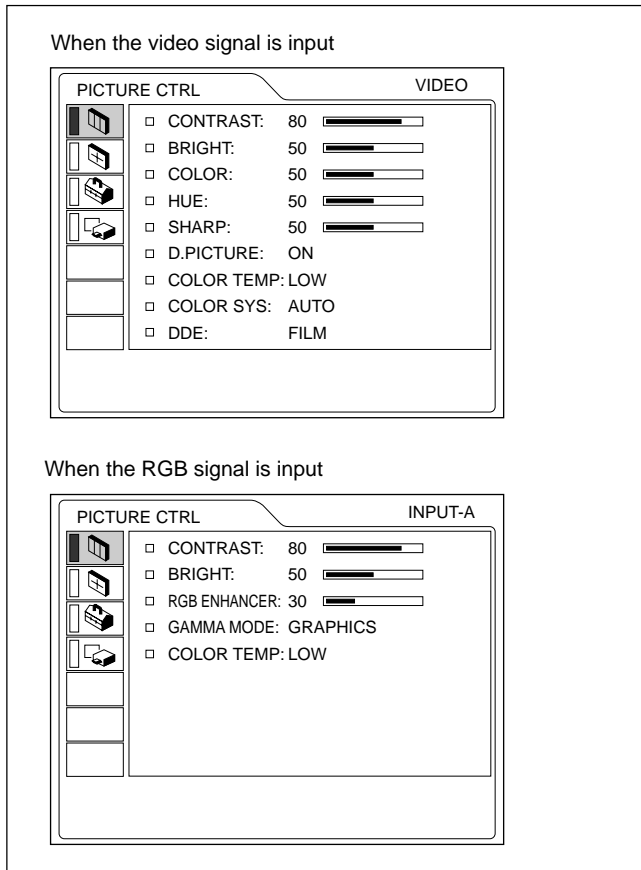
You can set the display position of the menu, intensity of the background picture and tone of the menu items as you like.

*For details, see page 27 (GB).*

# The PICTURE CTRL Menu

The PICTURE CTRL (control) menu is used for adjusting the picture.

Unadjustable items depending on the input signal are not displayed in the menu.



## Operation

### 1. Select an item

Use the **↑** or **↓** key to select the item, then press the **→** or **ENTER** key.

### 2. Adjust an item

- When changing the adjustment level:  
To increase the number, press the **↑** or **→** key.  
To decrease the number, press the **↓** or **←** key.  
Press the **ENTER** key to restore the original screen.
- When changing the setting:  
Press the **↑** or **↓** key to change the setting.  
Press the **ENTER** or **←** key to restore the original screen.

## CONTRAST

Adjusts the picture contrast.  
The higher the setting, the greater the contrast.  
The lower the setting, the lower the contrast.

## BRIGHT

Adjusts the picture brightness.  
The higher the setting, the brighter the picture.  
The lower the setting, the darker the picture.

## COLOR

Adjusts color intensity.  
The higher the setting, the greater the intensity.  
The lower the setting, the lower the intensity.

## HUE

Adjusts color tones.  
The higher the setting, the picture becomes greenish.  
The lower the setting, the picture becomes purplish.

## SHARP

Adjusts the picture sharpness.  
The higher the setting, the sharper the picture.  
The lower the setting, the softer the picture.

## RGB ENHANCER

Adjusts the picture sharpness when the RGB signals are input.  
The higher the setting, the sharper the picture.  
The lower the setting, the softer the picture.

## D. (Dynamic) PICTURE

Emphasizes the black color.  
**ON:** Emphasizes the black color to produce a bolder “dynamic” picture.  
**OFF:** Reproduces the dark portions of the picture accurately, in accordance with the source signal.

## GAMMA MODE

Selects a gamma correction curve.  
**GRAPHICS:** Improves the reproduction of half tones. Photos can be reproduced in natural tones.  
**TEXT:** Contrasts black and white. Suitable for images that contain lots of text.

## COLOR TEMP

Adjusts the color temperature.  
**HIGH:** Makes the white color bluish.  
**LOW:** Makes the white color reddish.

## COLOR SYS (System)

Selects the color system of the input signal.

**AUTO:** Automatically selects one of the following signals: NTSC<sub>3.58</sub>, PAL, SECAM, NTSC<sub>4.43</sub>.

**PAL-M/N:** Automatically selects one of the following signals: PAL-M/PAL-N, NTSC<sub>3.58</sub>.

Normally, set to AUTO.

If the picture is distorted or colorless, select the color system according to the input signal.

## DDE (Dynamic Detail Enhancer)

Selects the reproduction format of the input video signals according to the video sources.

**FILM:** Normally, set to this position. Reproduces the 2-3 Pull-Down film sources with smooth picture movement.

When the video signal with a format other than the 2-3 Pull-Down is input, PROGRESSIVE is automatically selected.

**PROGRESSIVE:** Converts an interlace format video signal to a progressive format.

**OFF:** Plays back the video signal in an interlace format without converting.

## Input signals and adjustable/setting items

Item	Input signal			
	Video or S video (Y/C)	Component	Video GBR	RGB <sup>1)</sup>
CONTRAST	●	●	●	●
BRIGHT	●	●	●	●
COLOR	● (except for B & W)	●	●	—
HUE	● (NTSC <sub>3.58</sub> / 4.43 only)	●	●	—
SHARP	●	●	●	—
RGB ENHANCER	—	—	—	●
D. PICTURE	●	● (480/60i, 575/50i)	● (480/60i, 575/50i)	—
GAMMA MODE	—	—	● (480/60i, 575/50i)	●
COLOR TEMP	●	●	●	●
COLOR SYS	●	—	—	—
DDE	●	● (480/60i, 575/50i)	● (480/60i, 575/50i)	—

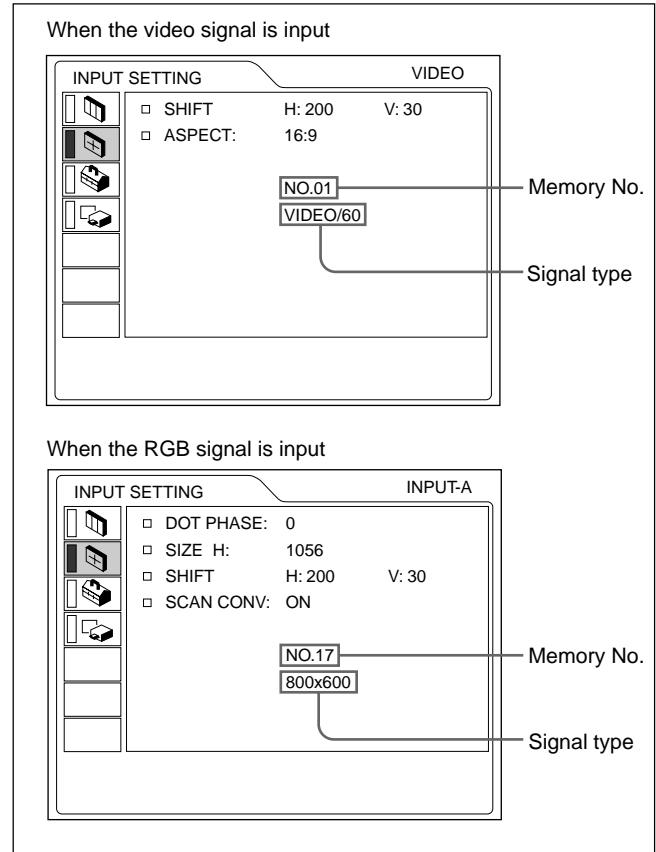
● : Adjustable/can be set

— : Not adjustable/can not be set

## The INPUT SETTING Menu

The INPUT SETTING menu is used to adjust the input signal.

Unadjustable items depending on the input signal are not displayed in the menu.



### Operation

#### 1. Select an item

Use the **↑** or **↓** key to select the item, then press the **→** or ENTER key.

#### 2. Adjust an item

- When changing the adjustment level:  
To increase the number, press the **↑** or **→** key.  
To decrease the number, press the **↓** or **←** key.  
Press the ENTER key to restore the original screen.
- When changing the setting:  
Press the **↑** or **↓** key to change the setting.  
Press the ENTER or **←** key to restore the original screen.

### DOT PHASE

Adjusts the dot phase of the LCD panel and the signal input from the INPUT A/B (analog signal only) connector. Adjust the picture further for finer picture after the picture is adjusted with pressing the APA key. Adjust the picture to where it looks clearest.

1) The RGB signals of a computer. INPUT C is adjustable for the same items as that of the RGB (digital) signals.

## SIZE H

Adjusts the horizontal size of picture input from the INPUT A/B (analog signal only) connector.

The higher the setting, the larger the horizontal size of the picture.

The lower the setting, the smaller the horizontal size of the picture. Adjust the setting according to the dots of the input signal.

For details on the suitable value for the preset signals, see page 25 (GB).

## SHIFT

Adjusts the position of the picture input from the INPUT A/B (analog signal only) connectors or VIDEO IN jacks.

H adjusts the horizontal position of the picture.

V adjusts the vertical position of the picture.

As the setting for H increases, the picture moves to the right, and as the setting decreases, the picture moves to the left.

As the setting for V increases, the picture moves up, and as the setting decreases, the picture moves down.

Use the ← or → key to adjust the horizontal position and the ↑ or ↓ key for the vertical position.

### Note

If you adjust DIGIT KEYSTONE (page 27) and SHIFT for the UXGA input signal, the picture may not be displayed correctly.

## ASPECT

Sets the aspect ratio of the picture.

When inputting 16:9 (squeezed) signal from equipment such as a DVD player, set to 16:9.

**4:3** : When the picture with ratio 4:3 is input.

**16:9** : When the picture with ratio 16:9 (squeezed) is input.

## SCAN CONV (Scan converter)

Converts the signal to display the picture according to the screen size.

**ON**: Displays the picture according to the screen size. The picture will lose some clarity.

**OFF**: Displays the picture while matching one pixel of input picture element to that of the LCD. The picture will be clear but the picture size will be smaller.

### Note

This item is displayed only when the computer signal (except for the XGA, SXGA and UXGA signals) is input.

## Input signals and adjustable/setting items

Item	Input signal			
	Video or S video (Y/C)	Component	Video GBR	RGB <sup>1)</sup>
DOT PHASE	—	● (HDTV only)	● (HDTV only)	● (Analog only)
SIZE H	—	● (HDTV only)	● (HDTV only)	● (Analog only)
SHIFT	●	●	●	● (Analog only)
ASPECT	●	● (480/60i,575/50i,480/60p,575/50p)	● (480/60i,575/50i,480/60p,575/50p)	—
SCAN CONV	—	—	—	● (lower than SVGA only)

● : Adjustable/can be set

— : Not adjustable/can not be set

### About the preset memory No.

This projector has 44 kinds of preset data for input signals (the preset memory). The memory number of the current input signal and the signal type are displayed when the preset signal is input. This projector automatically detects the signal type. When the signal is registered to the preset memory, a suitable picture is displayed on the screen according to the signal type. You can adjust the picture through the INPUT SETTING menu.

This projector also has 20 kinds of user memories for each INPUT-A/B (analog signal only). When an unpreset signal is input for the first time, memory number is displayed as 0. If the input signal is adjusted in the INPUT SETTING menu, the setting via INPUT-A/B (analog signal only) is stored. When more than 20 user memories are registered for each INPUT-A/B (analog signal only), the newest memory is automatically stored over the oldest one.

1) The RGB signals of a computer. INPUT C is adjustable for the same items as that of the RGB (digital) signals.



## Preset signals

Memory No.	Preset signal	fH (kHz)	fV (Hz)	Sync	SIZE H
1	Video 60 Hz	15.734	59.940	H-neg V-neg	
2	Video 50 Hz	15.625	50.000	H-neg V-neg	
3	480/60i	15.734	59.940	S on G/Y or Composite sync	
4	575/50i	15.625	50.000		
5	1035/60i 1080/60i	33.750	60.000		
6*	640 × 350 VGA mode 1	31.469	70.086	H-pos V-neg	800
7*	VGA VESA <sup>1)</sup> 85 Hz	37.861	85.080	H-pos V-neg	832
8*	640 × 400 PC-9801 <sup>2)</sup> Normal	24.823	56.416	H-neg V-neg	848
9	VGA mode 2	31.469	70.086	H-neg V-pos	800
10	VGA VESA 85 Hz	37.861	85.080	H-neg V-pos	832
11*	640 × 480 VGA mode 3	31.469	59.940	H-neg V-neg	800
12*	Macintosh 13"	35.000	66.667	H-neg V-neg	864
13*	VGA VESA 72 Hz	37.861	72.809	H-neg V-neg	832
14*	VGA VESA 75 Hz	37.500	75.000	H-neg V-neg	840
15*	VGA VESA 85 Hz	43.269	85.008	H-neg V-neg	832
16*	800 × 600 SVGA VESA 56 Hz	35.156	56.250	H-pos V-pos	1024
17*	SVGA VESA 60 Hz	37.879	60.317	H-pos V-pos	1056
18*	SVGA VESA 72 Hz	48.077	72.188	H-pos V-pos	1040
19*	SVGA VESA 75 Hz	46.875	75.000	H-pos V-pos	1056
20*	SVGA VESA 85 Hz	53.674	85.061	H-pos V-pos	1048
21*	832 × 624 Macintosh 16"	49.724	74.550	H-neg V-neg	1152
22*	1024 × 768 XGA VESA 43 Hz	35.524	43.479	H-pos V-pos	1264
23*	XGA VESA 60 Hz	48.363	60.004	H-neg V-neg	1344
24*	XGA VESA 70 Hz	56.476	69.955	H-neg V-neg	1328
25*	XGA VESA 75 Hz	60.023	75.029	H-pos V-pos	1312
26*	XGA VESA 85 Hz	68.677	84.997	H-pos V-pos	1376
27*	1152 × 864 SXGA VESA 70 Hz	63.995	70.016	H-pos V-pos	1472
28*	SXGA VESA 75 Hz	67.500	75.000	H-pos V-pos	1600
29*	SXGA VESA 85 Hz	77.487	85.057	H-pos V-pos	1568
30*	1152 × 900 Sunmicro LO	61.795	65.960	H-neg V-neg	1504
31*	Sunmicro HI	71.713	76.047	Composite sync	1472
32*	1280 × 960 SXGA VESA 60 Hz	60.000	60.000	H-pos V-pos	1800
33	SXGA VESA 75 Hz	75.000	75.000	H-pos V-pos	1728
34*	1280 × 1024 SXGA VESA 43 Hz	46.433	43.436	H-pos V-pos	1696
35*	SGI-5	53.316	50.062	S on G	1680
36*	SXGA VESA 60 Hz	63.974	60.013	H-pos V-pos	1696
37	SXGA VESA 75 Hz	79.976	75.025	H-pos V-pos	1688
38	SXGA VESA 85 Hz	91.146	85.024	H-pos V-pos	1728
39	1600 × 1200 UXGA VESA 60 Hz	75.000	60.000	H-pos V-pos	2160
43	480/60P (Progressive component)	31.470	60.000		
44	575/50P (Progressive component)	31.250	50.000		
45	1080/50i	28.130	50.000		
47	720/60p	45.000	60.000		
48	720/50p	37.500	50.000		

Since the data is recalled from the preset memory about the following signals, you can use these preset data by adjusting SIZE H. Make fine adjustment by adjusting SHIFT.

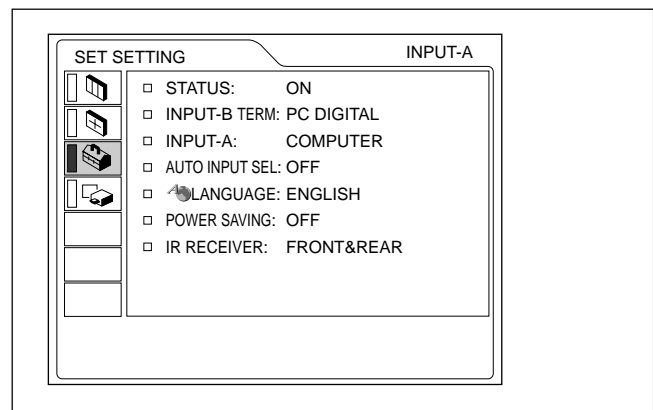
Signal	Memory No.	SIZE H
Super Mac-2	23	1312
SGI-1	23	1320
Macintosh 19"	25	1328
Macintosh 21"	27	1456
Sony News	36	1708
PC-9821 1280 × 1024	36	1600
WS Sunmicro	37	1664

### Notes

- When the aspect ratio of an input signal is other than 4:3, a part of the screen is displayed in black.
- The UXGA signal can be projected only when you set the frequency of a computer to 60 Hz.
- The digital input complies with the signals marked with asterisks on the table. When the digital signal output from a computer is a signal other than the signals marked with asterisks among the memory numbers 6 to 39, it is automatically output according to the specifications of the projector.

## The SET SETTING Menu

The SET SETTING menu is used for changing the settings of the projector.



### Operation

#### 1. Select an item

Use the **↑** or **↓** key to select the item, then press the **→** or ENTER key.

#### 2. Change the setting

Press the **↑** or **↓** key to change the setting.

To restore the original screen, press the ENTER or **←** key.

1) VESA is a registered trademark of Video Electronics Standard Association.

2) PC-98 is a registered trademark of NEC Corporation.

## STATUS (on-screen display)

Sets up the on-screen display.

**ON:** Shows all of the on-screen displays.

**OFF:** Turns off the on-screen displays except for the menus, a message when turning off the power, and warning messages.

For details on the warning messages, see page 33 (GB).

## INPUT-B TERM.

Set to PC ANALOG when the RGB signal input to the INPUT B RGB (DVI) connector is analog, and to PC DIGITAL when the input RGB signal is digital.

## INPUT-A

Selects the computer, component or video GBR (15k RGB, DTV, HDTV) signal input from the INPUT A connector.

### Note

If the setting is not correct, “Please check INPUT-A setting.” appears on the screen and the color of the picture becomes strange or the picture is not displayed.

## AUTO INPUT SEL

When set to ON, the projector detects input signals in the following order: INPUT-A/INPUT-B/INPUT-C/VIDEO/S-VIDEO. It indicates the input channel when the power is turned on or the INPUT key is pressed.

## LANGUAGE

Selects the language used in the menu and on-screen displays.

Available languages are: English, French, German, Italian, Spanish, Japanese and Chinese.

## POWER SAVING

When set to ON, the projector goes into the power saving mode if no signal is input for 10 minutes.

## IR RECEIVER

Selects the remote control detectors on the front and rear of the projector.

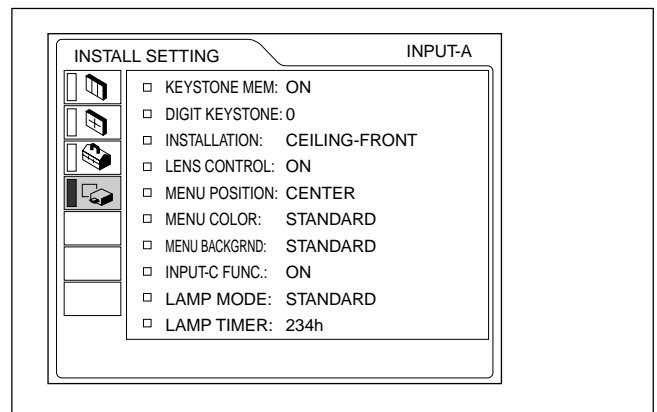
**FRONT & REAR:** Activates both the front and rear detectors.

**FRONT:** Activates the front detector only.

**REAR:** Activates the rear detector only.

# The INSTALL SETTING Menu

The INSTALL SETTING menu is used for changing the settings of the projector.



## Operation

### 1. Select an item

Use the **↑** or **↓** key to select the item, then press the **→** or ENTER key.

### 2. Adjust an item

- When changing the adjustment level:  
To increase the number, press the **↑** or **→** key.  
To decrease the number, press the **↓** or **←** key.  
Press the ENTER key to restore the original screen.
- When changing the setting:  
Press the **↑** or **↓** key to change the setting.  
Press the ENTER or **←** key to restore the original screen.

---

## KEYSTONE MEM

- ON:** DIGIT KEYSTONE setting is stored.  
The data is retrieved when the projector power is turned on. The setting will remain the same every time.
- OFF:** DIGIT KEYSTONE is reset to 0 when the power is turned on next time.

---

## DIGIT KEYSTONE

Corrects the trapezoid caused by the projection angle. If the base edge is longer, set a negative value; if the upper edge is longer, set a positive value to square the image.

### Note

If you adjust SHIFT (page 24) and DIGIT KEYSTONE for the UXGA input signal, the picture may not be displayed correctly.

---

## INSTALLATION

Sets to reverse the picture horizontally or vertically.

**FLOOR-FRONT:** The picture is not reversed.

**CEILING-FRONT:** The picture is reversed horizontally and vertically.

**FLOOR-REAR:** The picture is reversed horizontally.

**CEILING-REAR:** The picture is reversed vertically.

### Note

In case of using a mirror, be careful of installation since the picture may be reversed.

---

## LENS CONTROL

When set to OFF, the LENS CONTROL FOCUS, ZOOM and SHIFT keys do not function.

---

## MENU POSITION

Selects the display position of the menu from TOP LEFT, BOTTOM LEFT, CENTER, TOP RIGHT and BOTTOM RIGHT.

---

## MENU COLOR

Selects the tone of the menu display from STANDARD, WARM, COOL, GREEN or GRAY.

---

## MENU BACKGRND

Selects the intensity of the background picture of the menu display from DARK, STANDARD or LIGHT.

---

## INPUT-C FUNC.

Set to ON when using the Windows CE function.

### Note

Be sure to exit every application software that is open before you switch the setting ON to OFF. Otherwise, system down may occur and you may not restart the projector.

---

## LAMP MODE

Sets the lamp brightness in the projection.

**STANDARD:** Illuminates with normal brightness.

**LOW:** Reduces fan noise and power consumption.

Compared with the STANDARD setting, the brightness of an image projecting under the LOW setting will be low.

If the LAMP MODE is set to LOW, the next time the power is turned on, the lamp will use the STANDARD setting for the first 3 minutes, and then go to LOW.

---

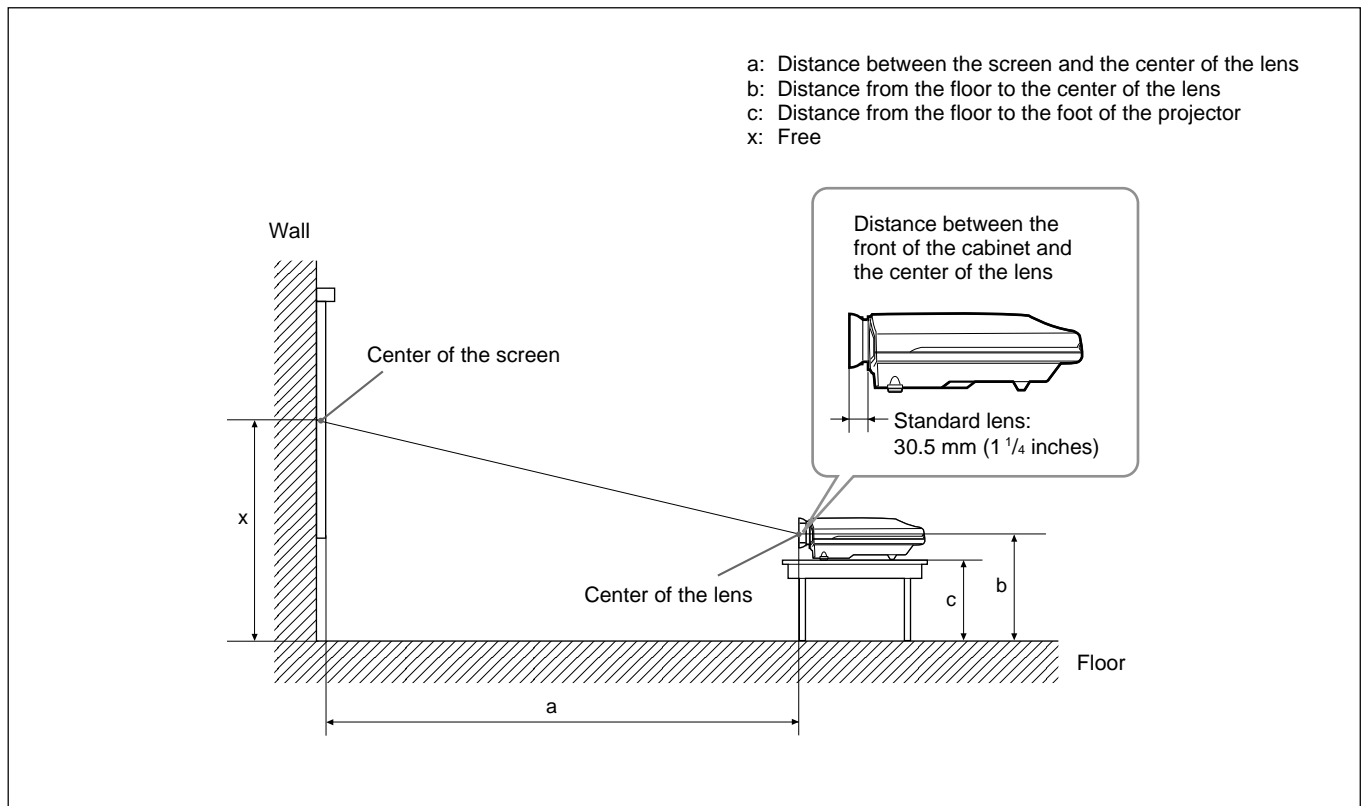
## LAMP TIMER

Indicates how long the lamp has been turned on.

### Note

This only displays the time. You cannot alter the display.

# Installation Example



Unit: mm (inches)

Screen size (inches)		40	60	80	100	120	150	180	200	250	300
a	Minimum	1490 (58 3/4)	2280 (89 7/8)	3060 (120 1/2)	3850 (151 5/8)	4630 (182 3/8)	5810 (228 7/8)	6980 (274 7/8)	7770 (306)	9730 (383 1/8)	11690 (460 3/8)
	Maximum	1820 (71 3/4)	2780 (109 1/2)	3740 (147 3/8)	4700 (185 1/8)	5660 (222 7/8)	7100 (279 5/8)	8540 (336 3/8)	9500 (374 1/8)	11900 (468 5/8)	14300 (563 1/8)
b	Minimum	x-305 (x-12 1/8)	x-457 (x-18)	x-610 (x-24 1/8)	x-762 (x-30)	x-914 (x-36)	x-1143 (x-45)	x-1372 (x-54 1/8)	x-1524 (x-60)	x-1905 (x-75 1/8)	x-2286 (x-90 1/8)
	Maximum	x									
c	Minimum	x-415 (x-16 3/8)	x-567 (x-22 3/8)	x-720 (x-28 3/8)	x-872 (x-34 3/8)	x-1024 (x-40 3/8)	x-1253 (x-49 3/8)	x-1482 (x-58 3/8)	x-1634 (x-64 3/8)	x-2015 (x-79 11/32)	x-2396 (x-94 3/8)
	Maximum	x-100 (x-4)									

## To calculate the installation measurement (unit: mm)

SS: screen size diagonal (inches)

$$a \text{ (minimum)} = \{(SS \times 50.127/1.3102) - 73.9\} \times 1.025$$

$$a \text{ (maximum)} = \{(SS \times 64.519/1.3102) - 107.9\} \times 0.975$$

$$b \text{ (minimum)} = x - (SS/1.3102 \times 9.984)$$

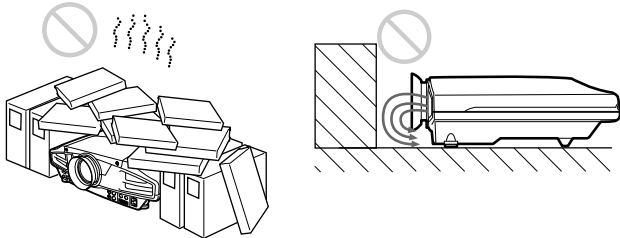
$$c \text{ (minimum)} = x - (SS/1.3102 \times 9.984 + 110)$$

# Notes for Installation

## Unsuitable Installation

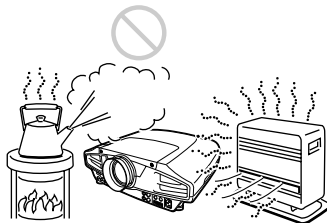
Do not install the projector in the following situations. These installations may cause malfunction or damage to the projector.

### Poorly ventilated



- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes. When the internal heat builds up due to the block-up, the temperature sensor will function with the message “High temp.! Lamp off in 1 min.” The power will be turned off automatically after one minute.
- Leave space of more than 50 cm (19 3/4 inches) around the unit.
- Be careful that the ventilation holes may inhale tininess such as a piece of paper.
- If you put something in front of the front ventilation holes, the exhaust may be inhaled into the projector through the ventilation holes at the bottom, causing the internal temperature to rise, which activates the protection circuit. Install the projector so that the exhaust is not blocked.

### Highly heated and humid



- Avoid installing the unit in a location where the temperature or humidity is very high, or temperature is very low.
- To avoid moisture condensation, do not install the unit in a location where the temperature may rise rapidly.

### Very dusty

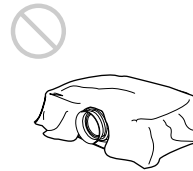


Avoid installing the unit in a location where there is a lot of dust; otherwise, the air filter will be obstructed. The dust blocking the air through the filter may cause raising the internal heat of the projector. Clean it up periodically.

## Unsuitable Conditions for Use

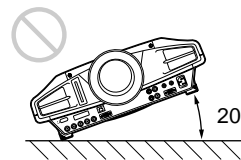
Do not do any of the following.

### Blocking the ventilation holes



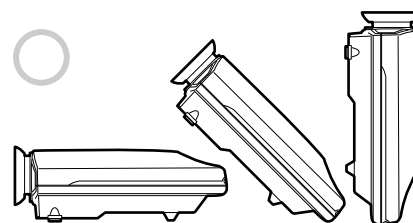
Avoid using something to cover over the ventilation holes; otherwise, the internal heat may build up.

### Tilting right/left



Avoid using as the unit tilts more than 20 degrees. Do not install the unit other than on the floor or ceiling. These installations may cause malfunction.

The front to back tilt angle of this projector is not limited.



# Maintenance

## Notes

- If the lamp breaks, consult with qualified Sony personnel.
- Pull out the lamp unit by holding the handle. If you touch the lamp unit, you may be burned or injured.
- When removing the lamp unit, make sure it remains horizontal, then pull straight up. Do not tilt the lamp unit. If you pull out the lamp unit while tilted and if the lamp breaks, the pieces may scatter, causing injury.

## Replacing the Lamp


When the lamp has burnt out or dims, or “Please replace the lamp” appears on the screen, replace the lamp with a new one. The message appears after 1000 hours for the STANDARD setting, or about 1500 hours for the LOW setting in the LAMP MODE. Use LMP-F250 Projector Lamp as the replacement lamp.

The lamp life varies depending on conditions of use.

### When replacing the lamp after using the projector

Turn off the projector, then unplug the power cord. Wait for at least an hour for the lamp to cool.

## Note

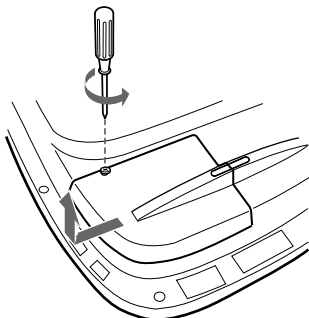
The lamp becomes a high temperature after turning off the projector with the I /  key. If you touch the lamp, you may scald your finger. When you replace the lamp, wait for at least an hour for the lamp to cool.

- 1 Place a protective sheet (cloth) beneath the projector and put the projector face down.

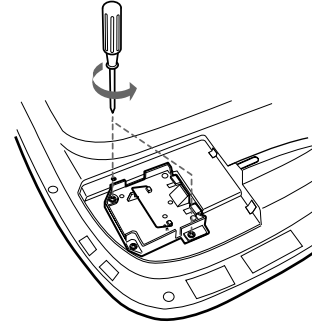
## Note

When replacing the lamp, be sure it is on a flat and stable surface.

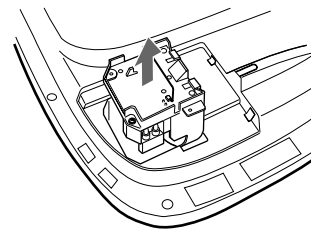
- 2 Slide to open the lamp cover by loosening one screw with the Phillips screwdriver.



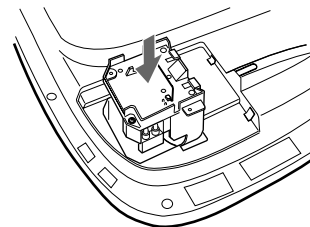
- 3 Loosen two screws on the lamp unit with the Phillips screwdriver.



- 4 While holding the handle and keeping the lamp unit horizontal, pull straight up.





- 5 Insert the new lamp all the way in until it is securely in place. Tighten the two screws. Fold down the handle.



## Notes

- Be careful not to touch the glass surface of the lamp.
- The power will not turn on if the lamp is not secured properly.

- 6 Close the lamp cover and tighten the screw.
- 7 Turn the projector back over.
- 8 Connect the power cord and turn the projector to the standby mode.
- 9 Press the following keys on the control panel in the following order for less than five seconds each: RESET, , , ENTER.

**Notes**

- Be sure to use the LMP-F250 Projector Lamp for replacement. If you use lamps other than LMP-F250, the projector may cause a malfunction.
- Be sure to turn off the projector and unplug the power cord before replacing the lamp.
- Do not put your hands into the lamp replacement spot, or not fall any liquid or object into it to avoid electrical shock or fire.

**Disposal of used projector lamp**

As the materials used in this lamp are similar to those of a fluorescent lamp, you should dispose of a used projector lamp in the same way as a fluorescent lamp.

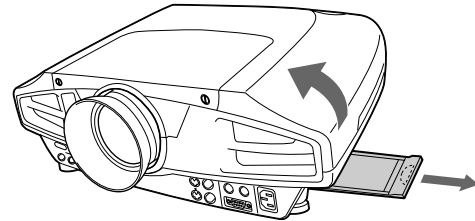
**Cleaning the Air Filter**

**The air filter should be cleaned every 300 hours.**

When it becomes difficult to remove the dust from the filter, replace the filter with a new one.

To clean the air filter, follow the steps below:

- 1** Turn off the power and unplug the power cord.
- 2** Raise the side of the projector, and pull out the air filter.



- 3** Remove the dust from the filter with a vacuum cleaner.
- 4** Insert the air filter all the way in until it is securely in place.

**Notes**

- If you neglect the air filter, dust may accumulate, clogging it. As a result, the temperature may rise inside the unit, leading to a possible malfunction or fire.
- Be sure to insert the air filter firmly; the power will not be turned on if it is not closed securely.

# Troubleshooting

If the projector appears to be operating erratically, try to diagnose and correct the problem, using the following guide. If the problem still persists, consult with qualified Sony personnel.

## Power

Symptom	Cause	Remedy
The power is not turned on.	The power has been turned off and on with the I / ⏻ key at a short interval.	Wait for about 120 seconds before turning on the power (see page 20 (GB)).
	The lamp cover is detached.	Close the lamp cover securely (see page 30 (GB)).
	The air filter is not inserted securely.	Insert the air filter securely (see page 31 (GB)).

## Image

Symptom	Cause	Remedy
No picture.	Cable is disconnected or not connected properly.	Check that the proper connections have been made (see pages 15 (GB) to 17 (GB)).
	Input selection is incorrect.	Select the input source correctly using the INPUT key (see page 18 (GB)).
	The picture is cut off.	Press the PIC MUTING key to release the muting function (see page 19 (GB)).
	The computer signal is not set to output to external monitor.	Set the computer signal to output to external monitor (see page 15 (GB)).
	The computer signal is set to output to both the LCD of the computer and external monitor.	Set the computer signal to output only to external monitor (see page 15 (GB)).
The picture is noisy.	Noise may appear on the background depending on the combination of the numbers of dot input from the connector and numbers of pixel on the LCD panel.	Change the desktop pattern on the connected computer.
On-screen display does not appear.	STATUS in the SET SETTING menu has been set to OFF.	Set STATUS in the SET SETTING menu to ON (see page 26 (GB)).
The picture from INPUT B connector is not projected.	Setting for INPUT-B TERM. in the SET SETTING menu is incorrect.	Set INPUT-B TERM. in the SET SETTING menu correctly according to the input signal (see page 26 (GB)).
The digital picture from INPUT B connector is not projected.	The connecting procedures are wrong.	Make connections using the proper procedures (see page 15 (GB)).
The picture from INPUT C is frozen.	There is something wrong with the network.	Set INPUT C FUNC. in the INSTALL SETTING menu to OFF, then set it to ON again (see page 27 (GB)).
Color balance of the video picture is not correct.	The color system of the input signal is not set correctly.	Set COLOR SYS in the PICTURE CTRL menu to match the color system of the input signal (see page 23 (GB)).



## Others

Symptom	Cause	Remedy
The LAMP/COVER indicator flashes.	The lamp cover is detached or the air filter is not inserted securely.	Attach the lamp cover or insert the air filter securely (see pages 30 (GB) and 31 (GB)).
The LAMP/COVER indicator lights up.	The lamp has reached the end of its life.	Replace the lamp (see page 30 (GB)).
	The lamp becomes a high temperature.	Wait for 120 seconds to cool down the lamp and turn on the power again (see page 20 (GB)).
The TEMP/FAN indicator flashes.	The fan is broken.	Consult with qualified Sony personnel.
The TEMP/FAN indicator lights up.	The internal temperature is unusually high.	Check to see if nothing is blocking the ventilation holes.
Both LAMP/COVER and TEMP/FAN indicators light up.	The electric system failed.	Consult with qualified Sony personnel.
The INPUT C window does not appear, or INPUT C cannot be selected.	INPUT C FUNC. is set to OFF.	Set INPUT C FUNC. in the INSTALL SETTING menu to ON (see page 27 (GB)).
The menu display does not appear even when you press the MENU key on the Remote Commander.	The PJ/NETWORK select switch on the Remote Commander is set to NETWORK.	Set the PJ/NETWORK select switch to PJ, then press the MENU key.

## Warning messages

Use the list below to check the meaning of the messages displayed on the screen.

Message	Meaning	Remedy
High temp.! Lamp off in 1 min.	Internal temperature is too high.	Turn off the power. Check to see if nothing is blocking the ventilation holes.
Frequency is out of range!	This input signal cannot be projected as the frequency is out of the acceptable range of the projector.	Input a signal that is within the range of the frequency.
	The resolution setting of the output signal of a computer is too high.	Set the setting of output to the XGA (see page 15 (GB)).
Please check INPUT-A setting.	You have input RGB signal from the computer when INPUT-A in the SET SETTING menu is set to COMPONENT or VIDEO GBR.	Set INPUT-A correctly (see page 26 (GB)).
Please replace the LAMP.	It is time to replace the lamp.	Please replace the lamp.
Backup Battery Very Low	A backup battery for the network is exhausted.	Consult with qualified Sony personnel.

## Caution messages

Use the list below to check the meaning of the messages displayed on the screen.

Message	Meaning	Remedy
NO INPUT	No input signal	Check connections (see pages 15 (GB) to 17 (GB)).
Not applicable!	You have pressed the wrong key.	Press the appropriate key.
LENS CONTROL is locked! Do you wish to unlock?	LENS CONTROL in the INSTALL SETTING menu is set to OFF.	Select YES, or set LENS CONTROL in the INSTALL SETTING menu to ON, according to your requirement.

# Specifications

## Optical characteristics

Projection system	3 LCD panels, 1 lens, projection system
LCD panel	1.3-inch TFT SONY LCD panel with micro-lens array, 2,359,296 pixels (1024 × 768 pixels × 3)
Lens	Approx. 1.3 times power zoom/ focus lens f 50.8 to 64.0 mm/F 1.7 to 2.0
Lamp	250 W UHP
Projection picture size	Range: 40 to 300 inches (diagonal measure)
Light output	ANSI lumen <sup>1)</sup> 3500 lm
Throwing distance	40-inch: 1490 to 1820 mm (58 <sup>3</sup> / <sub>4</sub> to 71 <sup>3</sup> / <sub>4</sub> inches) 60-inch: 2280 to 2780 mm (89 <sup>7</sup> / <sub>8</sub> to 109 <sup>1</sup> / <sub>2</sub> inches) 80-inch: 3060 to 3740 mm (120 <sup>1</sup> / <sub>2</sub> to 147 <sup>3</sup> / <sub>8</sub> inches) 100-inch: 3850 to 4700 mm (151 <sup>5</sup> / <sub>8</sub> to 185 <sup>1</sup> / <sub>8</sub> inches) 120-inch: 4630 to 5660 mm (182 <sup>3</sup> / <sub>8</sub> to 222 <sup>7</sup> / <sub>8</sub> inches) 150-inch: 5810 to 7100 mm (228 <sup>7</sup> / <sub>8</sub> to 279 <sup>5</sup> / <sub>8</sub> inches) 180-inch: 6990 to 8540 mm (275 <sup>1</sup> / <sub>4</sub> to 336 <sup>3</sup> / <sub>8</sub> inches) 200-inch: 7770 to 9500 mm (306 to 374 <sup>1</sup> / <sub>8</sub> inches) 250-inch: 9740 to 11900 mm (383 <sup>5</sup> / <sub>8</sub> to 468 <sup>5</sup> / <sub>8</sub> inches) 300-inch: 11700 to 14300 mm (460 <sup>3</sup> / <sub>4</sub> to 563 <sup>1</sup> / <sub>8</sub> inches)

## Electrical characteristics

Color system	NTSC <sub>3.58</sub> /PAL/SECAM/NTSC <sub>4.43</sub> /PAL-M/PAL-N system, switched automatically/manually
Resolution	750 horizontal TV lines (Video input) 1024 × 768 pixels (RGB input)
Acceptable computer signals	fH: 15 to 91 kHz fV: 43 to 85 Hz

## Input/Output

VIDEO IN	VIDEO: BNC type Composite video: 1 Vp-p ±2 dB sync negative (75 ohms terminated) S VIDEO: Y/C mini DIN 4-pin type (male) Y (luminance): 1 Vp-p ±2 dB sync negative (75 ohms terminated) C (chrominance): burst 0.286 Vp-p ±2 dB (NTSC) (75 ohms terminated), burst 0.3 Vp-p ±2 dB (PAL) (75 ohms terminated)
VIDEO OUT	VIDEO: Loop-through BNC type Loop-through output from the VIDEO IN connector S VIDEO: Loop-through mini DIN 4-pin type (male) Loop-through output from the S VIDEO IN connector
INPUT A	Analog RGB/component: 5BNC (female) R/R-Y: 0.7 Vp-p ±2 dB (75 ohms terminated) G: 0.7 Vp-p ±2 dB (75 ohms terminated) G with sync/Y: 1 Vp-p ±2 dB sync negative (75 ohms terminated) B/B-Y: 0.7 Vp-p ±2 dB (75 ohms terminated) SYNC/HD: Composite sync input: 1-5 Vp-p high impedance, positive/negative Horizontal sync input: 1-5 Vp-p high impedance, positive/negative VD: Vertical sync input: 1-5 Vp-p high impedance, positive/negative
INPUT B	Digital/Analog RGB: DVI-I (TMDS)
INPUT C	ETHER 10BASE-T/100BASE-TX standard PC CARD slot PC card slot Type II

1) ANSI lumen is a measuring method of American National Standard IT 7.228.

MONITOR OUT	HD D-sub 15-pin (female) R/R-Y, G/Y, B/B-Y: Gain Unity, 75ohms SYNC/HD, VD: 4Vp-p (open), 1Vp-p (75ohms)
RS-232C	D-sub 9-pin (female)
CONTROL S IN/PLUG IN POWER	Stereo minijack 5Vp-p, plug in power, DC5V
TRIG	Minijack Power on: DC 12 V, output impedance: 4.7 kilohms Power off: 0 V
Safety regulations	UL, cUL DHHS DNHW FCC Class A IC Class A NEMKO CE (LVD, EMC) C-Tick

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### Laser beam

Laser type	Class 2
Wavelength	645 nm
Output	1 mW

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### General

Dimensions	480 × 167 × 502 mm (19 × 6 1/2 × 19 7/8 inches) (w/h/d)
Mass	Approx. 10.5 kg (23 lb 2 oz)
Power requirements	AC 100 to 240 V, 50/60 Hz
Power consumption	Max. 360 W Standby mode: 5 W (when INPUT-C FUNC. is set to ON: 10 W) 3.6–1.5A
Heat dissipation	1228.6 BTU
Operating temperature	0°C to 40°C (32°F to 104°F)
Operating humidity	35% to 85% (no condensation)
Storage temperature	–20°C to 60°C (–4°F to 140°F)
Storage humidity	10% to 90%

### Supplied accessories

Remote Commander RM-PJM50	(1)
Size AA (R6) batteries	(2)
Lens Cap	(1)
AC power cord	(1)
Operating Instructions	(1)
Operating Instructions for Networking	(1)
Installation Manual for Dealers	(1)
Warranty Booklet	(1)

Design and specifications are subject to change without notice.

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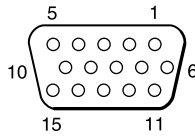
### Optional accessories

Projector Lamp LMP-F250 (for replacement)	
Projector Suspension Support PSS-620	
Monitor Cable	
SMF-400 (HD D-sub 15-pin (male) ↔ 5 × BNC (male))	
Signal Interface Cable	
SIC-10 (5 × BNC (male) ↔ 5 × BNC (male))	
Projection Lens	
Long Focus Zoom Lens VPLL-ZM101	
Short Focus Zoom Lens VPLL-ZM31	
Fixed Short Focus Lens VPLL-FM21	

*Some of the items may not be available in some areas. For details, please consult your nearest Sony office.*

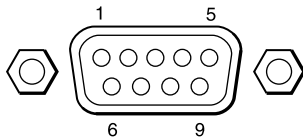
## Pin assignment

### MONITOR OUT connector (HD D-sub 15-pin, female)



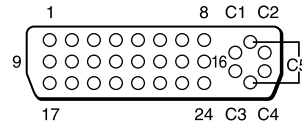
1	R	9	NC
2	G	10	GND
3	B	11	GND
4	NC	12	NC
5	GND	13	HD/C.Sync
6	GND (R)	14	VD
7	GND (G)	15	NC
8	GND (B)		

### RS-232C connector (D-sub 9-pin, female)



1	DCD	6	DSR
2	RX DA	7	RTS
3	TX DA	8	CTS
4	DTR	9	RI
5	GND		

### DVI input connector (DVI-I, female)



1	T.M.D.S. Data2-	16	Hot Plug Detect
2	T.M.D.S. Data2+	17	T.M.D.S. Data0-
3	T.M.D.S. Data2/4 Shield	18	T.M.D.S. Data0+
4	T.M.D.S. Data4-	19	T.M.D.S. Data0/5 Shield
5	T.M.D.S. Data4+	20	T.M.D.S. Data5-
6	DDC Clock	21	T.M.D.S. Data5+
7	DDC Data	22	T.M.D.S. Clock Shield
8	Analog Vertical Sync	23	T.M.D.S. Clock+
9	T.M.D.S. Data1-	24	T.M.D.S. Clock-
10	T.M.D.S. Data1+	C1	Analog Red
11	T.M.D.S. Data1/3 Shield	C2	Analog Green
12	T.M.D.S. Data3-	C3	Analog Blue
13	T.M.D.S. Data3+	C4	Analog Horizontal Sync
14	+5V Power	C5	Analog Ground (analog R, G & B return)
15	Ground (return for +5V, HSync, and VSync)		

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